REPLACEMENT SHEET

Title: NON-SPECIFIC SENSOR ARRAY DETECTORS
Inventor(s): Gregory STEINTHAL et al.
Appl. No.: 10/624,194

FIG. 1a
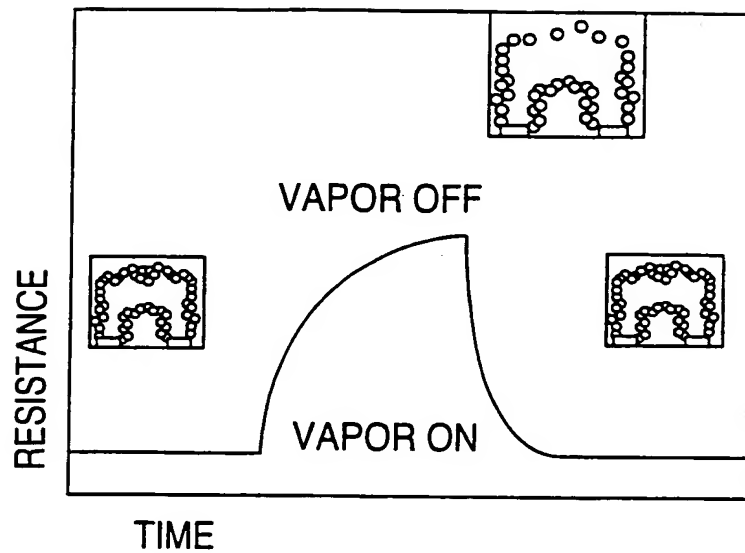

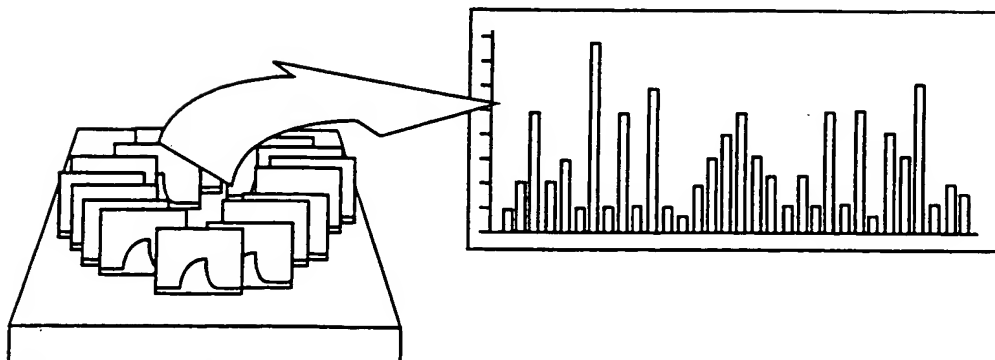# FIG. 1b

FIG. 2

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FIG. 3a

ATTACHMENT DEVICE

45

SENSOR ARRAY

15

PNEUMATIC PUMP SYSTEM

35

COMMUNICATION MODULE

30

MEMORY

40

ALARM

25

DIGITAL SIGNAL PROCESSOR

20

10

FIG. 4

MINIATURE FOUR CHANNEL BATTERY
POWERED CHEMICAL EVENT DETECTOR

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FIG. 5

1.25"

1.25"

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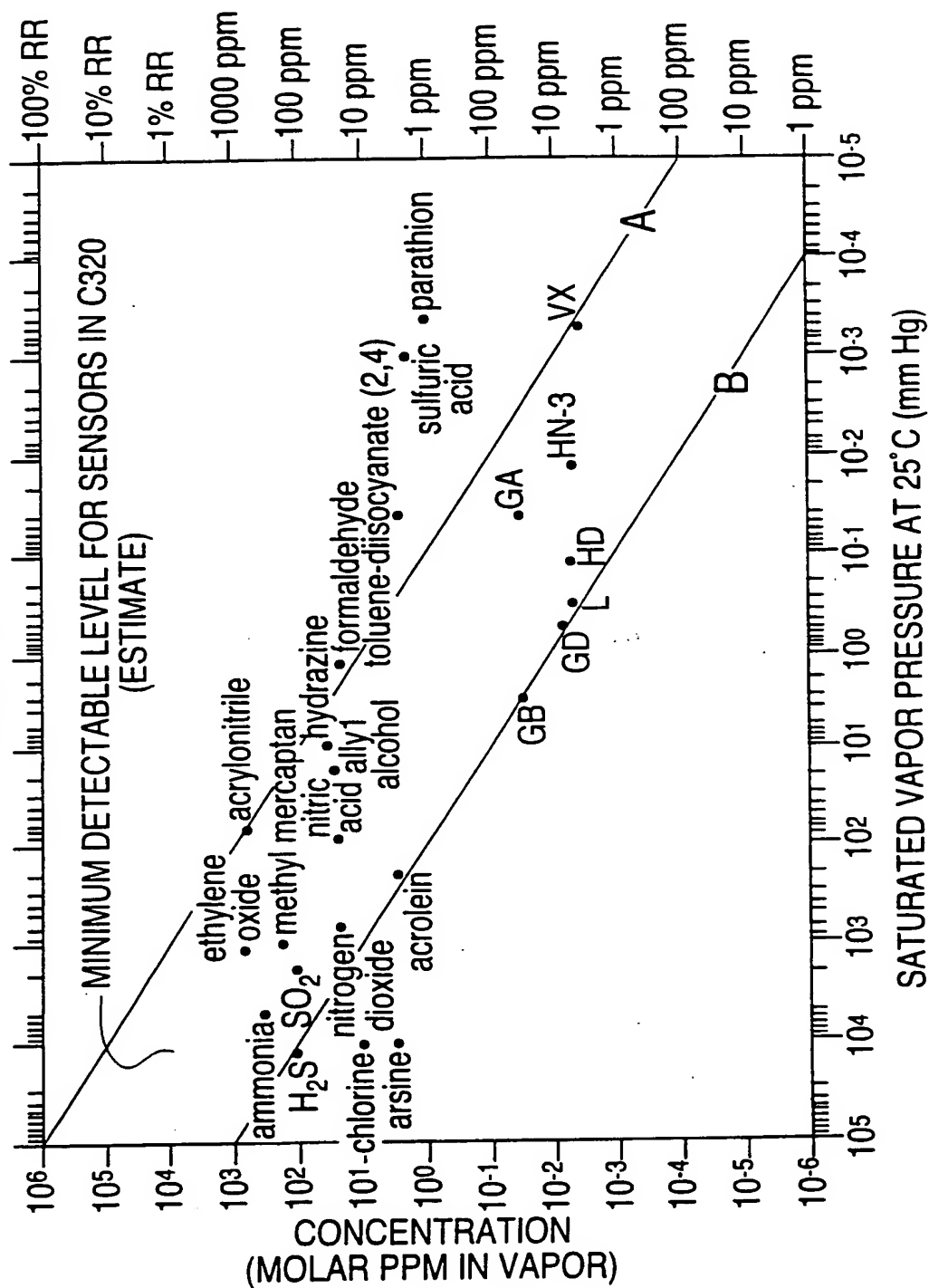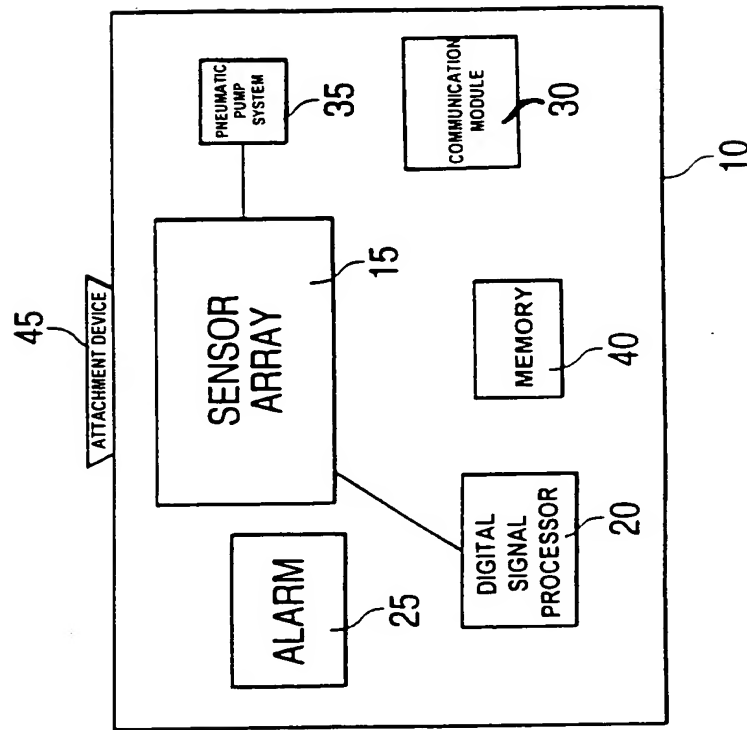Inventor(s): Gregory STEINTHAL et al.
Appl. No.: 10/624,194

FIG. 6

SERVER		
CONNECTIVITY, COMMAND, CONTROL & COMMUNICATIONS		
ALARM COORDINATION: SENSOR FUSION AT NODE LEVEL AND ZONE LEVEL		

ALARMS FOR ALL SENSORS ARE TRANSMITTED FROM REMOTE MONITORING UNITS (RMUs) TO THE SERVER

RMUs	
ALARM ALGORITHMS FOR EACH SENSOR AND EACH NODE	ALARM ALGORITHMS FOR EACH SENSOR AND EACH NODE

DATA FOR ALL SENSORS ARE TRANSMITTED FROM SENSORS TO REMOTE MONITORING UNITS (RMUs)

ZONES / NODES and **SENSORS**

Zone C:
- TEMPERATURE DETECTOR
- IONIZATION DETECTOR
- PHOTOELECTRIC DETECTOR
- CHEMICAL SENSOR ARRAY
- CO & CO_2 SENSORS
- VIDEO (VISIBLE, IR)
- RESPIRATOR INDICATOR
- STRESS/FORCE SENSOR
- FIREFIGHTER LOCATION

Zone B, Node 2:
- TEMPERATURE DETECTOR
- IONIZATION DETECTOR
- PHOTOELECTRIC DETECTOR
- CHEMICAL SENSOR ARRAY

Zone B, Node 1:
- TEMPERATURE DETECTOR
- IONIZATION DETECTOR
- PHOTOELECTRIC DETECTOR
- CHEMICAL SENSOR ARRAY

Zone A:
- TEMPERATURE DETECTOR
- IONIZATION DETECTOR
- PHOTOELECTRIC DETECTOR
- CHEMICAL SENSOR ARRAY

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FIG. 7

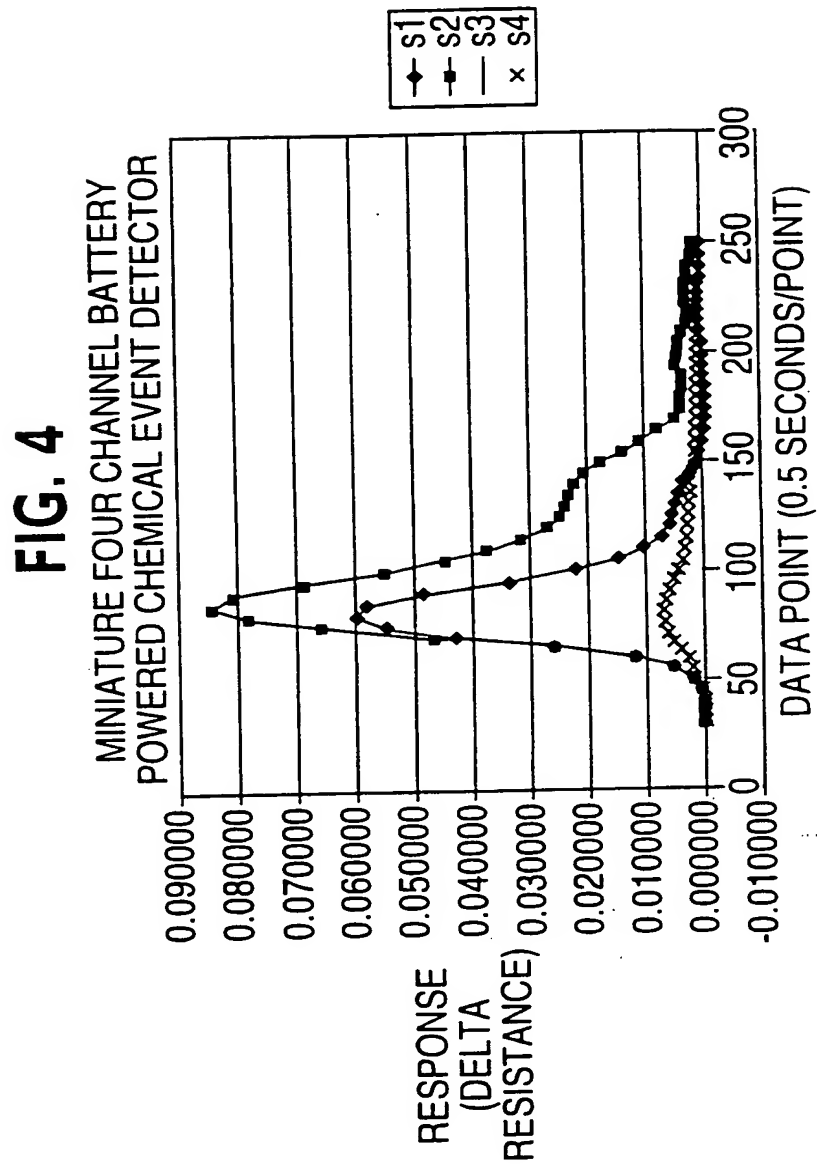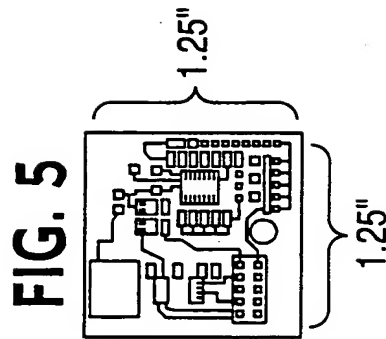FIG. 8

REPLACEMENT SHEET

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FIG. 9

REPLACEMENT SHEET

Title: NON-SPECIFIC SENSOR ARRAY DETECTORS
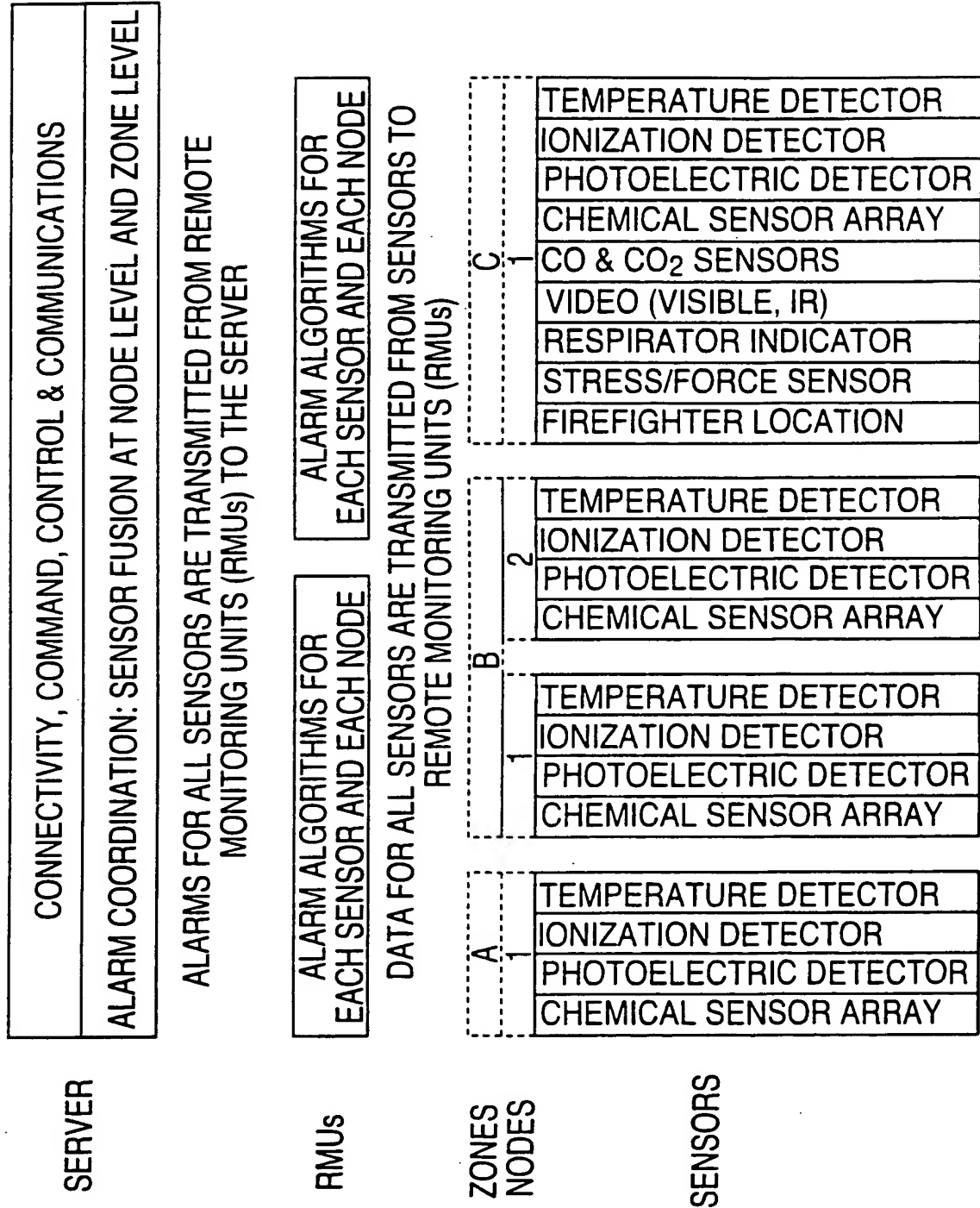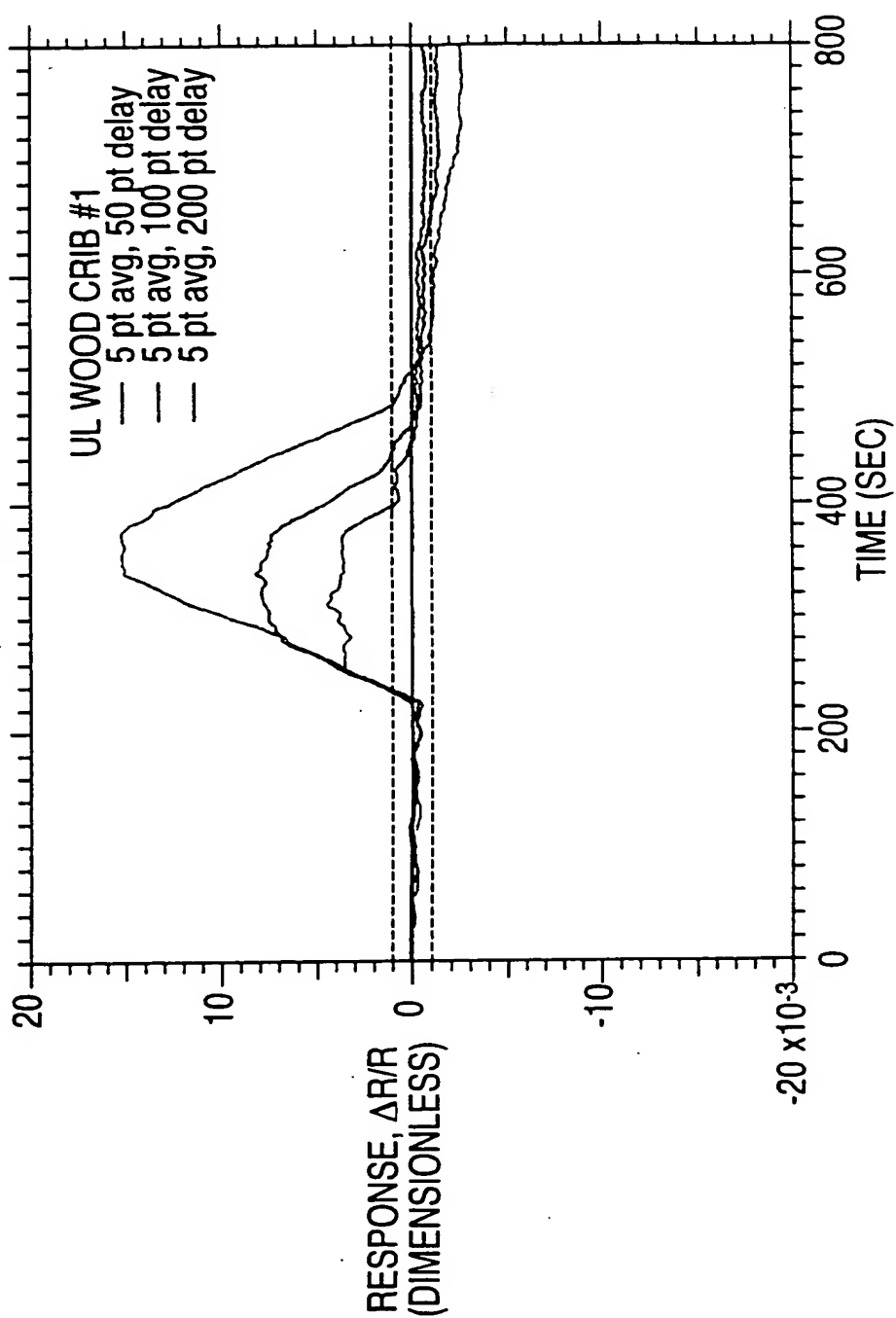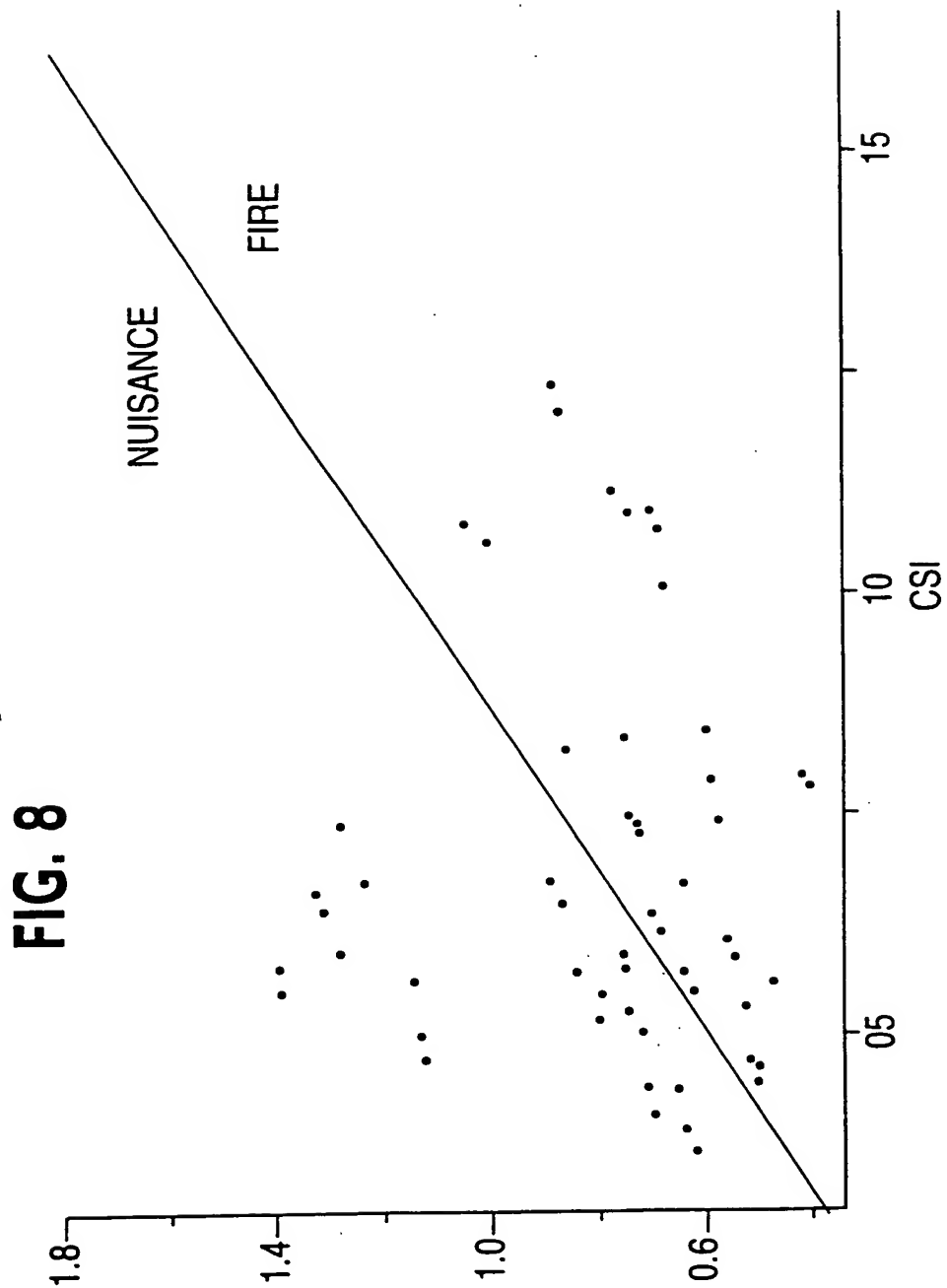Inventor(s): Gregory STEINTHAL et al.
Appl. No.: 10/624,194

FIG. 10
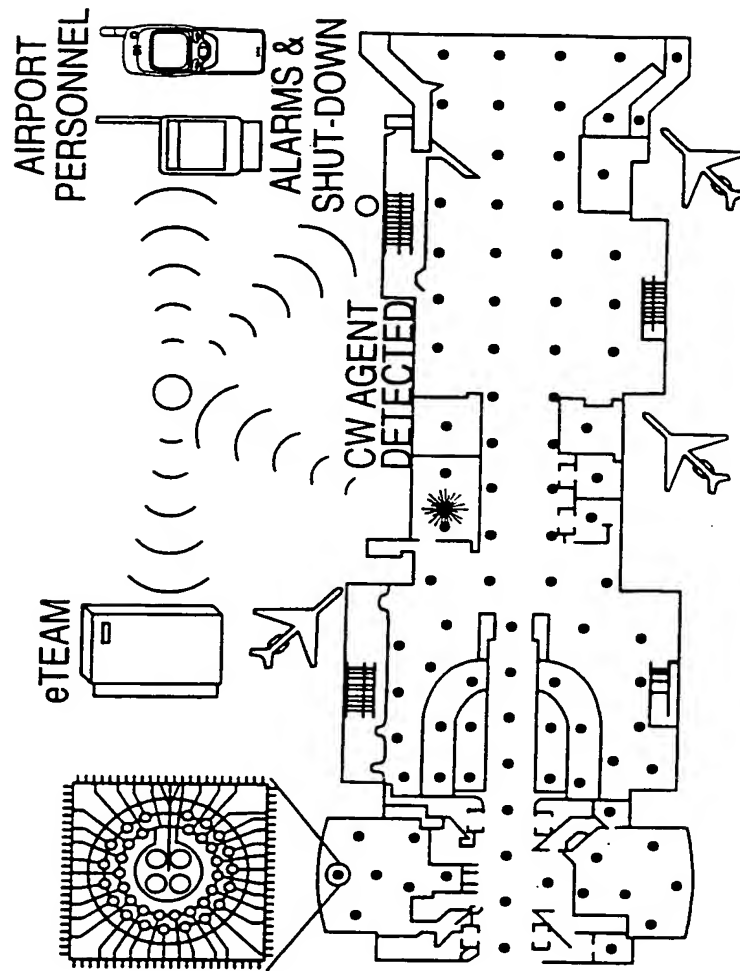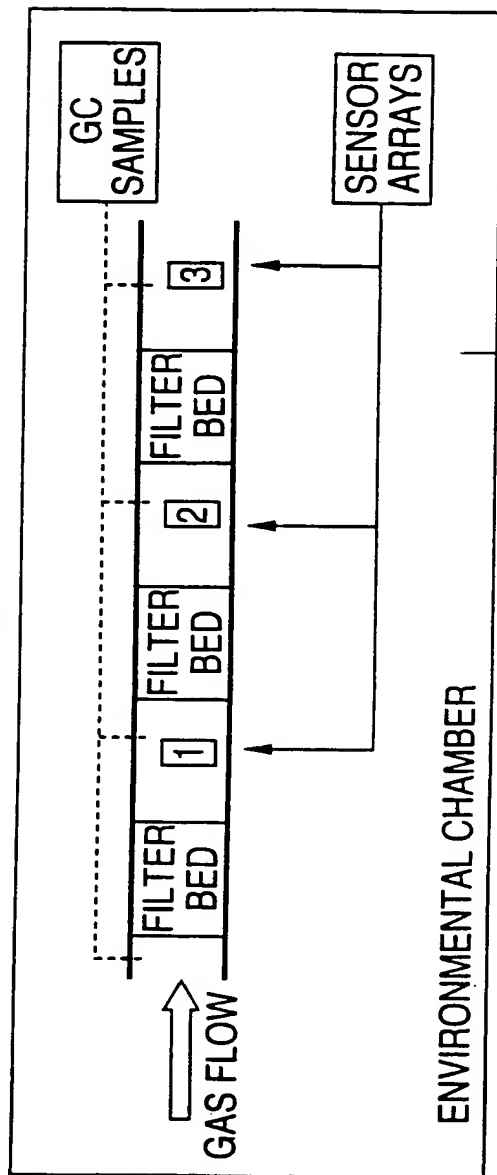
DISTRIBUTED SENSOR
NETWORKS AND NOTIFICATION

AIRPORT
PERSONNEL

ALARMS &
SHUT-DOWN

CW AGENT
DETECTED

eTEAM

REPLACEMENT SHEET

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FIG. 11

FIG. 19

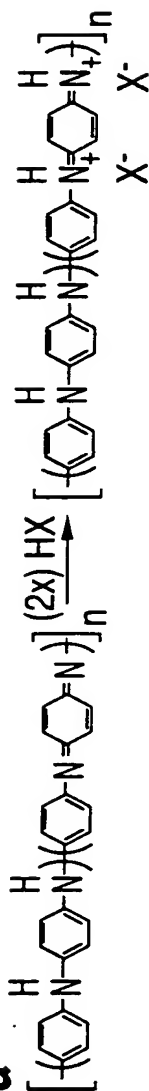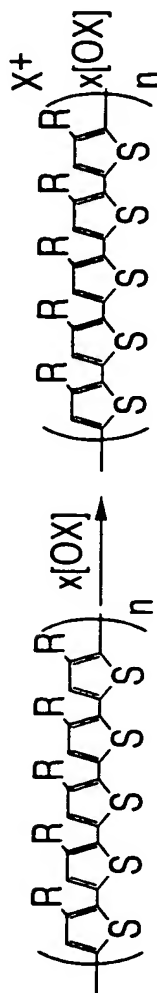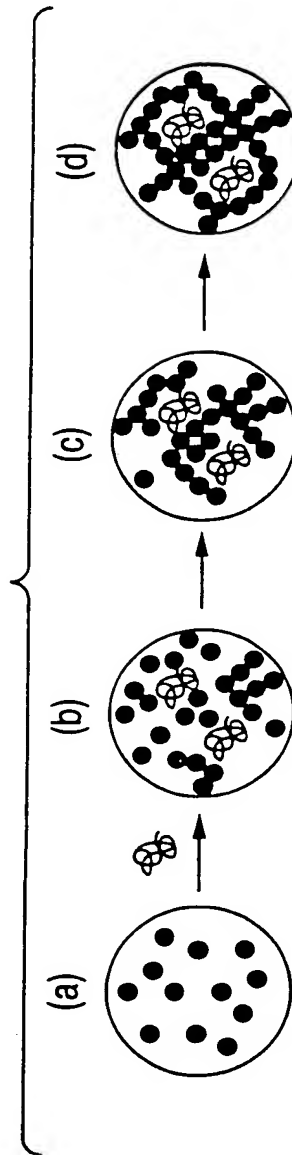| Sample #	Treatment	Solvents	Particle Size nm
6537-57b	Poly(isobutylene) on BP700	Isopar G	150
8847-9a	Polypropylene glycol on BP700	Xylene	180
6537-40	Poly(acrylic ester) on BP700	Ethanol	210
6537-51	Poly(acrylic acid) on BP700	water	210

FIG. 20a

FIG. 20b

FIG. 21

(a) (b) (c) (d)

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FIG. 23